

facilities replace copper facilities in the distribution section (e.g., end office to remote terminal, pedestal or environmentally controlled vault);

6.2.2 There are no spare copper loops capable of supporting the DSL services MCIIm seeks to offer;

6.2.3 Verizon has not permitted MCIIm to deploy a DSLAM at the remote terminal, pedestal or environmentally controlled vault or other interconnection point, nor has MCIIm obtained a virtual collocation arrangement at these subloop interconnection points; and

6.2.4 Verizon has deployed packet switching capability for its own use.

[Issue No. IV-20 Section 7 *et seq.* generally, resolved]

Section 7. Local Switching

[Issue No. III-8 (regarding application of Section 7.1 with respect to four line exemption), open 11/12/01]

7.1 Verizon shall provide MCIIm unbundled, Non-Discriminatory access to Local Switching (including the ability to route to MCIIm's transport facilities, dedicated facilities, and systems) at cost-based rates in accordance with Applicable Law; provided, however, that Verizon may charge the market-based rates set forth in Attachment I for Local Switching for MCIIm's provision of local service to customers who have four or more voice grade (DS0) or equivalent lines at one location in the density zone 1 of the Washington, D.C. and Norfolk-Virginia Beach-Newport News Metropolitan Statistical Areas (as defined as of January 1, 1999 under Section 69.123 of the FCC's rules), if Verizon also provides to MCIIm throughout the relevant density zone 1 Non-Discriminatory access at cost-base rates in accordance with Applicable Law to Loop/Transport Combinations (including multiplexing/concentration equipment).

7.1.1 Definition. Local Switching (also known as Circuit Switching) is the Network Element that provides MCIIm the ability to use switching functionality in a Verizon end office switch, including all vertical services, features, functions, and capabilities of a switch that Verizon already provides. MCIIm may request modifications to the switching functionality, including the vertical services and/or features, available in a Verizon end office switch pursuant to the BFR process set forth in Part A, Section [6]. Local Switching will be provisioned with a port element, which provides line or trunk side access to Local Switching.

7.1.2 "Port element" or "port" means a line card (or equivalent) and associated peripheral equipment on an end office switch which serves as the interconnection between individual loops or individual subscriber trunks and the switching components of an end office switch and the associated switching functionality in that end office switch. Each port is typically associated with one (or more)

telephone number(s) which serves as the subscriber's network address. The Port element is part of the provision of Local Switching.

7.1.3 Local Switching includes white page listing, line side and trunk side facilities and all features, functions, and capabilities of the switch, including, but not limited to:

7.1.3.1 The basic switching function of connecting lines to lines, lines to trunks, trunks to lines, and trunks to trunks, as well as the same basic capabilities made available to Verizon's customers, such as a telephone number, and dial tone; and

7.1.3.2 All other features that the switch is capable of providing, including, but not limited to, custom local area signaling service features, and Centrex. Components of Local Switching, to the extent that they are separately charged, shall be charged at the rates set forth in Attachment I.

7.1.4 Verizon shall offer, as an optional chargeable feature, daily usage tapes that include the "to and from" number, start time, and stop time, by line port, for all recorded local, access, and toll usage. MCIIm may request activation or deactivation of features on a per port basis at any time, and shall compensate Verizon for the non-recurring charges associated with processing the order.

7.2 Local Switching - Technical Requirements

7.2.1 Verizon shall route calls to the appropriate trunk or lines for call origination or termination.

7.2.2 Intentionally Left Blank

7.2.3 Verizon shall provide standard recorded announcements at Parity.

7.2.4 Where requested by MCIIm, Verizon will attempt to change a subscriber from Verizon's services to MCIIm's services without loss of feature availability and functionality. However, depending on the technical arrangements MCIIm chooses to use to provide their end user services, some feature interaction conflicts and resulting loss of feature availability and functionality may result.

7.2.5 For unbundled Verizon switching in Combination with an unbundled Verizon loop, Verizon shall perform routine testing (e.g., mechanized loop tests (MLT)) at Parity upon receipt of a trouble report from MCIIm.

7.2.6 Verizon shall repair, restore and maintain Verizon-provided equipment that has produced trouble conditions, at Parity and in a Non-Discriminatory manner, to minimize recurrence of trouble conditions in MCIIm's use of Local Switching.

7.2.7 Verizon shall control congestion points such as mass calling events, and network routing abnormalities, using capabilities such as automatic call gapping, automatic congestion control, and network routing overflow at Parity and in a Non-Discriminatory manner.

7.2.8 Verizon shall record billable events, involving usage of the element, and send the appropriate recording data to MCIIm as outlined in Attachment VIII.

7.2.9 Unbundled switching will include 911 access on the same basis as such access is provided in Verizon's network.

7.2.10 Verizon shall provide switching service point (SSP) capabilities and signaling software to interconnect the signaling links destined to Verizon STPs at Parity. In the event that Local Switching is provided out of a switch without SS7 capability, and Verizon unbundled Shared Transport is purchased for use with Verizon's unbundled switching, Verizon's Tandem Office Switches shall provide this capability at Parity.

7.2.11 Verizon shall provide interfaces to Adjunct Equipment, which interfaces are identified in this Agreement, at Parity. Verizon shall provide interfaces to any other Adjunct Equipment at Parity pursuant to the BFR process.

7.2.12 Verizon shall assign each MCIIm subscriber line an unbundled switching class of service. MCIIm may request and Verizon will provide call blocking options (e.g., 900, 976) at Parity.

7.3 Interface Requirements.

7.3.1 Verizon shall provide the following unbundled switching interfaces:

Analog Basic (POTS) - line side, loop start or ground start signaling

Analog CENTREX - line side, loop start or ground start signaling

Analog PBX - line side, loop start or ground start signaling

Analog DID - trunk side, loop reverse-battery signaling, associated with a PBX

DS1 (DID) - trunk side, associated with a PBX

DS1 (IOF) - trunk side, associated with dedicated unbundled transport

These services are more fully described in Exhibits A and B of this Attachment III. Additional interfaces may be developed in accordance with the BFR process set forth in Section [6] of Part A of this Agreement.

7.3.2 Verizon shall offer access to the following at Parity:

7.3.2.1 SS7 signaling or multi-frequency trunking;

7.3.2.2 Access to other third-party carriers.

7.4 Integrated Services Digital Network (ISDN)

Implementation of the first customer application of unbundled ISDN switching will require technical and operational coordination and testing by MCIm and Verizon to ensure that the requirements set forth in this section can be met. Should any of these requirements prove technically infeasible, the Parties shall cooperate to determine the requirements applicable to the unbundled service.

7.4.1 Technical Requirements - ISDN

7.4.1.1 Verizon shall offer data switching providing ISDN that, at a minimum:

7.4.1.1.1 Provides integrated packet handling capabilities at Parity;

7.4.1.1.2 Allows for full 2B+D channel functionality for BRI at Parity; and

7.4.1.1.3 Allows for full 23B+D channel functionality for PRI at Parity.

7.4.1.1.4 Each B channel shall allow for voice, 64 Kbps CSD, and PSD of 128 logical channels at minimum speeds of 19 Kbps throughput of each logical channel up to the total capacity of the B channel.

7.4.1.1.5 Each B channel shall provide capabilities for alternate voice and data on a per call basis.

7.4.1.1.6 The BRI D channel shall allow for call associated signaling, non-call associated signaling and PSD of 16 logical channels at minimum speeds of 9.6 Kbps throughput of each logical channel up to the total capacity of the D channel.

7.4.1.1.7 The PRI D channel shall allow for call associated signaling.

7.4.2 Interface Requirements - ISDN

7.4.2.1 Verizon shall provide the BRI U interface using 2-wire copper loops in accordance with TR-NWT-000393, January 1991, Generic Requirements for ISDN Basic Access Digital Subscriber Lines.

7.4.2.2 Verizon shall provide the BRI interface using digital subscriber loops adhering to Bellcore TR-NWT-303 specifications to interconnect DLCs.

7.4.2.3 Verizon shall offer PSD interfaces adhering to the X.25, X.75 and X.75' ANSI and Bellcore requirements.

7.4.2.4 Verizon shall offer PSD trunk interfaces operating at 56 kbps.

Section 8. Operator Systems

See Attachment VIII, Sections [6.1.3] Directory Assistance Service and [6.1.4] Operator Service.

[Issue No. IV-21, resolved as to section 9]

Section 9. Shared Transport

9.1 Definition

9.1.1 Shared Transport means the Verizon-provided transmission facilities shared by more than one carrier, including Verizon, between end office switches and Verizon tandem switches, and between tandem switches in Verizon's network. Where Verizon Network Elements are connected by intra-office wiring, such wiring is provided as a part of the Network Elements and is not Shared transport. Shared Transport consists of Verizon inter-office transport facilities and is distinct and separate from Local Switching.

9.2 Technical Requirements

9.2.1 Verizon shall be responsible for the engineering, provisioning, and maintenance of the underlying equipment and facilities that are used to provide Shared Transport.

9.3 Verizon shall offer Shared Transport at DS0, DS1, DS3, STS-1 or higher transmission bit rates.

9.3.1 Verizon shall provide MCIIm with use of all Technically Feasible transmission facilities, features, functions, and capabilities of Shared Transport that MCIIm could use in the provision of telecommunications services.

9.3.2 Verizon shall permit, to the extent Technically Feasible, MCIIm to connect Shared Transport to equipment designated by MCIIm, including, but not limited to, MCIIm's collocated facilities.

[Issue No. IV-21, partially resolved 11/12/01]

Section 10. Dedicated Transport

10.1 Definition

10.1.1 "Dedicated Transport" means the Verizon transmission facilities, including all Technically Feasible capacity-related services including, but not limited to, DS1, DS3 and OCn levels, dedicated to a particular customer or carrier, that provide telecommunications between wire centers owned by Verizon or requesting telecommunications carriers, or between switches owned by Verizon or requesting telecommunications carriers.

10.1.2 Verizon shall offer unbundled and Non-Discriminatory access to Dedicated Transport.

10.1.3 When Dedicated Transport is provided as a circuit, it will have available (as appropriate):

10.1.3.1 Optional multiplexing functionality;

10.1.3.2 Grooming functionality in accordance with Section [10.3] herein; and,

10.1.3.3 Redundant equipment and facilities necessary to support protection and restoration at Parity and in a Non-Discriminatory manner.

10.1.4 Verizon shall provide MCIIm with use of all Technically Feasible transmission facilities, functions, and capabilities of Dedicated Transport that MCIIm could use in the provision of telecommunications services.

10.1.4.1 Verizon shall provide MCIIm exclusive use of Dedicated Transport facilities, features, functions, and capabilities.

10.1.4.2 Verizon shall permit, to the extent Technically Feasible, MCIIm to connect Dedicated Transport to equipment designated by MCIIm, including, but not limited to, MCIIm's collocated facilities.

10.2 Technical Requirements

This Section sets forth technical requirements for all Dedicated Transport.

10.2.1 Dedicated Transport shall provide physical diversity at Parity.

10.2.2 MCIIm may request that Verizon provide additional physical diversity. Verizon will provide such physical diversity where it is available, at Verizon's prevailing additional charge, if any. If physical diversity is not reasonably available in response to MCIIm's request, then MCIIm may order such additional physical diversity by submitting a request for special construction.

10.2.3 Dedicated Transport shall include DSX terminations at one or both ends, as applicable, in Verizon's Central Office location.

10.2.4 Verizon shall offer DCS and multiplexing, both together with, and separately from Dedicated Transport.

10.3 Digital Cross Connect System (DCS). At a minimum, Verizon shall permit MCIIm, to the extent Technically Feasible, to obtain the functionality provided by Verizon's DCS in the same manner that Verizon provides such functionality to interexchange carriers.

10.3.1 Definition. DCS is a device which provides electronic cross-connection of digital signal level 0 (DS0) or higher transmission bit rate digital channels within physical interface facilities. Types of DCSs include, but are not limited to, DCS 1/0s, where the nomenclature 1/0 denotes interfaces typically at the DS1 rate or greater with cross-connection typically at the DS0 rate.

10.3.2 DCS Technical Requirements

10.3.2.1 DCS shall provide cross-connection of the channels designated by MCIIm, either through service orders or by using Verizon's Intellimux capabilities.

10.3.2.2 Verizon shall continue to administer and maintain DCS, including updates to the control software to current available releases, at Parity.

10.3.2.3 Verizon shall provide various types of Digital Cross-Connect Systems including:

10.3.2.3.1 DS0 cross-connects (typically termed DCS 1/0).

10.3.2.3.2 Additional DCS types shall be requested in accordance with the BFR process set forth in Section [6] of Part A of this Agreement.

10.3.2.4 Through Verizon's Intellimux service capabilities, Verizon shall provide immediate and continuous configuration and reconfiguration of the channels between the physical interfaces (i.e., Verizon shall establish the processes to implement cross-connects on demand, or permit MCIm control of such configurations and reconfigurations).

10.3.2.5 Through Verizon's Intellimux service capabilities, Verizon shall provide scheduled configuration and reconfiguration of the channels between the physical interfaces (i.e., Verizon shall establish the processes to implement cross-connects on the schedule designated by MCIm, or permit MCIm to control such configurations and reconfigurations).

10.3.2.6 DCS shall continuously monitor protected circuit packs and redundant common equipment at Parity.

10.3.2.7 DCS shall automatically switch to a protection circuit pack on detection of a failure or degradation of normal operation at Parity.

10.3.2.8 The equipment used to provide DCS shall be equipped with a redundant power supply or a battery back-up at Parity.

10.3.2.9 Verizon shall make available for DCSs handling MCIm services, spare facilities, and equipment at Parity, necessary for provisioning repairs.

10.3.2.10 Through Verizon's Intellimux service capabilities, at MCIm's option, Verizon shall provide MCIm currently available performance monitoring and alarm data.

10.3.2.11 At MCIm's option, Verizon shall provide MCIm with the ability to initiate tests on DCS equipment. This will require MCIm to provide additional facilities from the DCS, back to MCIm's test center. The DCS can then be used to connect MCIm's test center ports to other MCIm circuits.

10.3.2.12 Where available, DCS shall provide multipoint bridging of multiple channels to other DCSs. MCIm may designate multipoint bridging to be one-way broadcast from a single master to multiple

tributaries, or two-way broadcast between a single master and multiple tributaries.

10.3.2.13 DCS shall multiplex lower speed channels onto a higher speed interface and demultiplex higher speed channels onto lower speed interfaces as designated by MCI.

[Issue No. IV-22, resolved]

Section 11. Signaling Link Transport

11.1 Definition

11.1.1 Verizon's CCS Access Service (CCSAS) allows interconnected carriers to exchange signaling information over a communications path which is separate from the message path. The transport portion of CCSAS is provided via a discretely rated dedicated 56 kbps out of band signaling connection between the carrier's Signaling Point of Interconnection (SPOI) and Verizon's STP.

11.1.2 Each CCSAS signaling connection provides for two-way digital transmission at speeds of 56 kbps. The connection to Verizon's STP pair can be made from either the carrier's signaling point (SP), which requires a minimum of two 56 kbps circuits, or from the carrier's STP pair, which requires a minimum of four (4) pairs of 56 kbps circuits.

11.1.3 STP locations are set forth in National Exchange Carrier Association (NECA) Tariff F.C.C. No. 4. Carriers ordering CCSAS are subject to the technical requirements specified in Verizon Tariff F.C.C. No. 1, Sections 2.3.9.1, 2.3.10 (B) (9) and 2.3.10 (9). Testing and certification reference documentation shall be pursuant to Verizon Tariff F.C.C. No. 1, Section 6.4.3 (A).

11.1.4 Each Party shall provide the other Party with access to databases and associated signaling necessary for call routing and completion by providing SS7 CCS interconnection in accordance with existing Tariffs, and interconnection and access to toll free databases, LIDB, and any other necessary databases in accordance with existing Tariffs and/or agreements with other unaffiliated carriers. Alternatively, either Party may secure CCS Interconnection from a commercial SS7 hub provider, and in that case the other Party will permit the purchasing Party to access the same databases as would have been accessible if the purchasing Party had connected via SS7 CCS directly to the other Party's CCS network.

11.1.5 Verizon shall permit MCI to access Verizon's LIDB to validate calling card numbers and requests for bill-to-third-party or collect billing. Verizon shall provide LIDB access at Parity and in a Non-Discriminatory manner by a SS7

formatted data query before call completion to determine the validity of the billing method requested by the caller. LIDB will respond with a SS7 formatted confirmation of validity or denial of the requested billing option.

11.1.6 The Parties will provide CCS Signaling to one another, where and as available, in conjunction with all local traffic, toll traffic, meet point billing traffic, and transit traffic. The Parties will cooperate on the exchange of TCAP messages to facilitate interoperability of CCS-based features between their respective networks, including all CLASS features and functions, to the extent each Party offers such features and functions to its subscribers. All CCS signaling parameters will be provided upon request (where available), including called party number, Calling Party Number, originating line information, calling party category, and Charge Number. All privacy indicators will be honored. The Parties will follow all relevant OBF adopted guidelines pertaining to CIC/OZZ codes. Where CCS Signaling is not available, in-band multi-frequency (MF) wink start signaling will be provided. Any such MF arrangement will require a separate local trunk circuit between the Parties' respective Switches. In such an arrangement, each Party will output the full ten-digit telephone number of the called party to the other party with appropriate call set-up and ANI where available, at Parity.

11.1.7 The following publications describe the practices, procedures and specifications generally utilized by Verizon for signaling purposes and are listed herein to assist the Parties in meeting their respective interconnection responsibilities related to signaling:

11.1.7.1 Bellcore GR-905-CORE, Issue 1, March 1995, and subsequent issues and revisions;

11.1.7.2 Verizon Supplement Common Channel Signaling Network Interface Specification, Verizon-905, December 1990; Issue, Supplement 1, June 1992; Supplement 2, August 1992; Supplement 3, January 1993; and

11.1.7.3 Verizon AIN SMS Network Disclosure (Date: December 1996, on Verizon World Wide Web site).

11.1.8 Each Party shall charge the other Party mutual and reciprocal rates for CCS Signaling as follows: Verizon shall charge MCI in accordance with Attachment I to this Agreement and applicable Tariffs; MCI shall charge Verizon rates equal to the rates Verizon charges MCI, unless MCI's Tariffs for CCS signaling provide for lower generally available rates, in which case MCI shall charge Verizon such lower rates.

11.1.9 MCIIm must meet interconnection certification testing requirements of the SS7 network before interconnection is permitted, and also before changes occur within the MCIIm SS7 network.

[Issue No. IV-22, resolved]

Section 12. Signaling Transfer Points (STPs)

12.1 Definition

12.1.1 Verizon's CCSAS allows interconnected carriers to exchange signaling information over a communications path which is separate from the message path. The discretely rated network termination point where this interconnection takes place is called the Verizon STP port termination.

12.1.2 Each CCSAS signaling connection provides for two-way digital transmission at speeds of 56 kbps. The connection to Verizon's STP pair can be made from either the carrier's SSP, which requires a minimum of two (2) 56 kbps circuits, or from the carrier's STP pair, which requires a minimum of four (4) pairs of 56 kbps circuits.

12.1.3 STP locations are set forth in National Exchange Carrier Association (NECA) Tariff F.C.C. No. 4. Carriers ordering CCSAS are subject to the technical requirements specified in Verizon Tariff F.C.C. No. 1, Sections 2.3.9.1, 2.3.10 (B) (9) and 2.3.10 (9). See Verizon Tariff F.C.C. No. 1, Section 6.4.3 (A) for testing and certification reference documentation).

12.2 Technical Requirements

12.2.1 STPs shall provide access to all other Network Elements connected to the Verizon network. These include:

12.2.1.1 Verizon Local Switching or Tandem Switching;

12.2.1.2 Verizon Service Control Points/databases;

12.2.1.3 Third-party local or Tandem Switching systems; and

12.2.1.4 Third-party-provided STPs.

12.2.2 The connectivity provided by STPs shall fully support the functions of all other Network Elements connected to the Verizon SS7 network. This explicitly includes the use of the Verizon SS7 network to convey messages which neither originate nor terminate at a signaling end point directly connected to the Verizon SS7 network (i.e., transit messages). When the Verizon SS7 network is used to

convey transit messages, there shall be no alteration of the integrated services digital network user part (ISDNUP) or Transaction Capabilities Application Part (TCAP) user data that constitutes the content of the message.

12.2.3 If a Verizon Tandem Switch routes calling traffic, based on dialed or translated digits, on SS7 trunks between an MCIIm local Switch and third-party local Switch, Verizon's SS7 network shall convey the TCAP messages that are necessary to provide call management features (automatic callback, automatic recall, and screening list editing) between the MCIIm local STPs and the STPs that provide connectivity with the third-party local Switch, even if the third-party local Switch is not directly connected to Verizon's STPs, providing that the third-party Switch is located in the same LATA.

12.2.3.1 Before Verizon transits TCAP messages to third parties, MCIIm shall provide Verizon with a letter of authorization from third party carriers to and from which Verizon will transit TCAP messages. Such letter of authorization must state that the third party carrier will accept TCAP messages from Verizon that originated on MCIIm's network.

12.2.4 In cases where the destination signaling point is a Verizon local or Tandem Switching system or database, or is an MCIIm or third-party local or Tandem Switching system directly connected to Verizon's SS7 network, Verizon STPs shall perform final GTT of messages to the destination and SCCP Subsystem Management of the destination. In all other cases, STPs shall perform intermediate GTT of messages to a gateway pair of STPs in an SS7 network connected with the Verizon SS7 network, and shall not perform SCCP subsystem management of the destination. Notwithstanding the foregoing, Verizon shall not be required to perform GTT if its applicable STP is not capable of performing GTT.

12.3 Interface Requirements

12.3.1 Verizon shall provide the following STPs options to connect MCIIm or MCIIm-designated Local Switching systems or STPs to the Verizon SS7 network:

12.3.1.1 An A-link interface from MCIIm Local Switching systems; and,

12.3.2 Each type of interface shall be provided by one or more sets (layers) of signaling links, as follows:

12.3.2.1 An A-link layer shall consist of two links.

12.3.3 The Signaling Point of Interconnection (SPOI) for each link shall be located at a cross-connect element, such as a DSX-1, in the Central Office where the Verizon STP is located. There shall be a DS1 or other mutually agreed upon

transport interface at each of the SPOIs. Each signaling link shall appear as a DS0 channel within the interface.

12.4 Message Screening

12.4.1 Verizon shall set message screening parameters so as to accept messages from MCIIm local or tandem switching systems destined to any signaling point in the Verizon SS7 network with which the MCIIm switching system has a legitimate signaling relation.

12.4.2 Verizon shall set message screening parameters so as to accept messages from MCIIm local or tandem switching systems destined to any signaling point or network interconnected to the Verizon SS7 network with which the MCIIm switching system has a legitimate signaling relation.

12.4.3 Verizon shall set message screening parameters so as to accept messages destined to an MCIIm local or tandem switching system from any signaling point or network interconnected to the Verizon SS7 network with which the MCIIm switching system has a legitimate signaling relation.

12.4.4 Verizon shall set message screening parameters so as to accept and send messages destined to an MCIIm SCP from any signaling point or network interconnected to the Verizon SS7 network with which the MCIIm SCP has a legitimate signaling relation, provided Verizon receives proper notification and agreement from the owner of such other networks.

12.5 STP Requirements

12.5.1 Verizon shall provide MTP and SCCP protocol interfaces in accordance with sections relevant to the MTP or SCCP in the following specifications:

12.5.1.1 Bellcore GR-905-CORE, Issue 1, March 1, Common Channel Signaling Network Interface Specification (CCSNIS) Supporting Network Interconnection, Message Transfer Part (MTP), and Integrated Services Digital Network User Part (ISDNUP).

[Issue No. IV-23, resolved]

Section 13. Call Related Databases and AIN

13.1 Definition

13.1.1 "Call Related Databases" are the Network Elements that provide the functionality for storage of, and access to, information required to route and complete a particular call. Call Related Databases include, but are not limited to:

LIDB, Toll Free Number Database, Calling Name database, number portability databases, 911 and E911 databases, and AIN databases.

13.1.2 A Service Control Point (SCP) is a specific type of database Network Element deployed in a Signaling System 7 (SS7) network that executes service application logic in response to SS7 queries sent to it by a switching system also connected to the SS7 network.

13.2 Technical Requirements for Call Related Databases

Requirements for Call Related Databases within this section address storage of information, access to information (e.g., signaling protocols, response times), and administration of information (e.g., provisioning, administration, and maintenance). All Call Related Databases shall be provided to MCIIm in accordance with the following requirements, except where such a requirement is superseded by specific requirements set forth in Subsections [13.3] through [13.6]:

13.2.1 Verizon shall provide physical interconnection to SCPs through the SS7 network and protocols, as specified in Section [12] of this Attachment, with TCAP as the application layer protocol.

13.2.2 Verizon shall provide physical interconnection to databases via existing interfaces and industry standard interfaces and protocols (e.g., 56 Kb TCP/IP).

13.2.3 The reliability of interconnection options shall be consistent with requirements for diversity and survivability as specified in Section [12] of this Attachment (which applies to both SS7 and non-SS7 interfaces).

13.2.4 Call Related Database functionality shall be available at Parity. If, based on information available through the process set forth in Section [3], MCIIm believes the functionality is inadequate to meet its needs, it may initiate a BFR.

13.2.5 Verizon shall complete database transactions (i.e., add, modify, delete) for MCIIm subscriber records stored in Verizon databases at Parity.

13.2.6 Verizon shall provide database maintenance consistent with the maintenance requirements as specified in this Agreement (e.g., notification of Verizon network affecting events, testing).

13.2.7 Verizon shall provide billing and recording information to track database usage consistent with connectivity billing and recording requirements for Call Related Databases as specified in this Agreement (e.g., recorded message format and content, timeliness of feed, data format and transmission medium).

13.2.8 Verizon shall provide Call Related Databases in accordance with the physical security requirements specified in this Agreement.

13.2.9 Verizon shall provide Call Related Databases in accordance with the logical security requirements specified in this Agreement.

13.3 Line Information Database (LIDB)

This Section [13.3] defines and sets forth additional requirements for the Line Information Database. This Subsection 13.3 supplements the requirements of Section [13.2] and [13.5].

13.3.1 Definition

LIDB is a transaction-oriented database accessible through CCS networks. It contains records associated with subscriber line numbers and special billing numbers (in accordance with the requirements in the technical reference in GR-1158-CORE OSSGR, Section 22.3). LIDB accepts queries from other Network Elements, or MCI's network, and provides appropriate responses. The query originator need not be the owner of LIDB data. LIDB queries include functions such as screening billed numbers that provides the ability to accept collect or third number billing calls and validation of telephone line number based non-proprietary calling cards. The interface for the LIDB functionality is the interface between the Verizon CCS network and other CCS networks. LIDB also interfaces to administrative systems. The administrative system interface provides Verizon work centers with an interface to LIDB for functions such as provisioning, auditing of data, access to LIDB measurements and reports.

13.3.2 Technical Requirements

13.3.2.1 Intentionally Left Blank

13.3.2.2 Intentionally Left Blank

13.3.2.3 Verizon shall enable MCI to store in Verizon's LIDB any subscriber line number or special billing number record (in accordance with the technical reference in GR-1158-CORE OSSGR, Section 22.3), whether ported or not, regardless of the number's NPA-NXX or NXX-0/1XX, in accordance with standard industry practices.

13.3.2.4 Verizon shall perform the following LIDB functions (i.e., processing of the following query types as defined in the technical reference in GR-1158-CORE OSSGR, Section 22.3) for MCI's subscriber records in LIDB:

13.3.2.4.1 Billed number screening (provides information such as whether the billed number may accept collect or third number billing calls); and

13.3.2.4.2 Calling card validation.

13.3.2.5 Verizon shall process MCIIm's subscriber records in LIDB at least at Parity with Verizon subscriber records, with respect to other LIDB functions (as defined in the technical reference in GR-1158-CORE OSSGR, Section 22.3). Verizon shall indicate to MCIIm what additional functions (if any) are performed by LIDB in Verizon's network.

13.3.2.6 Within two (2) weeks after a request by MCIIm, Verizon shall provide MCIIm with a list of the subscriber data items which MCIIm would have to provide in order to support billed number screening and calling card validation. The list shall indicate which data items are essential to LIDB function, and which are required only to support certain services. For each data item, the list shall show the data formats, the acceptable values of the data item and the meaning of those values.

13.3.2.7 Verizon shall provide LIDB systems with rates of operating deficiencies at Parity. If, based on information available through the process set forth in Section [3], MCIIm believes that the rate of deficiencies is inadequate to meet its needs, it may initiate a BFR.

13.3.2.8 Verizon shall provide MCIIm with the capability to provision (e.g., to add, update, and delete) NPA-NXX and NXX-0/IXX group records, and line number and special billing number records, associated with MCIIm subscribers, directly into Verizon's LIDB provisioning process.

13.3.2.9 As directed by MCIIm, in the event that end user subscribers change their local service provider, Verizon shall maintain subscriber data (for line numbers, card numbers, and for any other types of data maintained in LIDB), as mutually agreed by the Parties, so that such subscribers shall not experience any interruption of service, except for any interruption associated with a LIDB-only service order transaction at Parity. MCIIm shall submit LIDB updates on a timely basis.

13.3.2.10 All additions and updates of MCIIm data to the LIDB shall be solely at the direction of MCIIm. Verizon will process orders from other CLECs or from Verizon for subscribers that choose to migrate from MCIIm to another provider.

13.3.2.11 Verizon shall provide priority updates to LIDB for MCIIm data upon MCIIm's request (e.g., to support fraud protection) at Parity.

13.3.2.12 Verizon shall accept queries to LIDB associated with MCIIm subscriber records, and shall return responses in accordance with the requirements of this Section [13].

13.4 Toll Free Number Database

The "Toll Free Number Database" is an SCP that provides functionality necessary for toll free (e.g., 800 and 888) number services by providing routing information and additional features during call set-up in response to queries from SSPs. This Section [13.4] supplements the requirements of Section [13.2] and [13.5]. Verizon shall provide the Toll Free Number Database in accordance with the following:

13.4.1 Technical Requirements

13.4.1.1 Verizon shall make the Verizon Toll Free Number Database available for MCIIm to query, from MCIIm's designated switch including Local Switching, with a toll-free number and originating information.

13.4.1.2 The Toll Free Number Database shall return carrier identification and, where applicable, the queried toll free number, translated numbers and instructions as it would in response to a query from a Verizon switch.

13.4.2 Interface Requirements

The signaling interface between the MCIIm or other local switch and the Toll Free Number Database shall use the TCAP protocol, together with the signaling network interface.

13.5 Advanced Intelligent Network (AIN) Access, Service Creation Environment and Service Management System (SCE/SMS) Advanced Intelligent Network Access

13.5.1 Verizon shall provide access to any and all non-proprietary Verizon service applications resident in Verizon's SCP. Verizon shall identify to MCIIm any such proprietary services, and identify the basis for such designation. Such access may be from MCIIm's switch or Verizon's unbundled local switch.

13.5.2 SCE/SMS AIN access shall provide MCIIm the ability to create service applications in the Verizon SCE and deploy those applications via the Verizon SMS to the Verizon SCP using the same processes Verizon uses to deploy its own AIN-based services. This interconnection arrangement shall provide MCIIm access to the Verizon development environment in a manner at least at Parity with

Verizon's ability to deliver its own AIN-based services. SCE/SMS AIN Access is the creation and provisioning of AIN services in the Verizon network.

13.5.3 Verizon shall make SCE hardware, software, testing and technical support (e.g., help desk, system administrator) resources available to MCIIm. Scheduling of SCE resources shall allow MCIIm at least equal priority to Verizon.

13.5.4 The Verizon SCE/SMS shall allow for multi-user access. Source code (i.e., AIN service applications and process flow design developed by an MCIIm service designer/creator to provide AIN based services) management and other logical security functions will be provided.

13.5.5 Verizon shall provide reasonable protection to MCIIm service logic and data from unauthorized access, execution or other types of compromise.

13.5.6 Verizon or a designated vendor shall provide for service creation training, documentation, and technical support of MCIIm development staff at Parity with that provided to Verizon's own development staff. Training sessions shall be "suitcased" to MCIIm facilities or delivered at Verizon facilities at MCIIm's cost, at MCIIm's discretion, subject to vendor's requirements.

13.5.7 When MCIIm selects SCE/SMS AIN access, Verizon shall provide for a secure, controlled access environment on-site as well as via remote data connections (i.e., ISDN circuit switched data).

13.5.8 When MCIIm selects SCE/SMS AIN access, Verizon shall allow MCIIm to transfer data forms and/or tables to the Verizon SCP via the Verizon SMS (e.g., service customization and subscriber subscription) in a manner consistent with how Verizon provides that capability to itself.

13.5.9 When MCIIm selects SCE/SMS AIN access for providing services on MCIIm's network, the Parties will work cooperatively to resolve technical and provisioning issues.

[Issue No. IV-25, partially resolved 11/12/01]

13.6 Calling Name (CNAM) Database. The "CNAM Database" means the database in which Verizon stores subscriber information (including name and telephone number) used to show the customer name of an incoming call on a display attached to the telephone whether or not such database contains exclusively CNAM information. Verizon shall provide MCIIm with access to Verizon's CNAM Database in accordance with the following:

13.6.1 Verizon shall provide to MCIIm all subscriber records used by Verizon to create and maintain its CNAM database, in a Non-Discriminatory manner. MCIIm

may combine this Network Element with any other Network Element for the provision of any Telecommunications Service.

13.6.2 Verizon shall provide MCIIm all ILEC, CLEC, and independent telco subscriber records used by Verizon within its CNAM database in a non-discriminatory manner. Verizon shall provide MCIIm with a complete list of the ILECs, CLECs, and independent telcos whose subscriber information is contained in the Verizon CNAM database.

13.6.3 Upon MCIIm's request, Verizon shall provide via electronic data transfer an initial load of subscriber records contained in its CNAM Database. The NPAs included must represent the entire Verizon operating territory in the State. The initial load shall reflect all data that is current as of one business day prior to the provision date.

13.6.4 On a daily basis, Verizon shall provide updates (end user and mass) to the CNAM Database information via electronic data transfer. Updates must be current as of one business day prior to the date provided to MCIIm.

13.6.5 Verizon shall provide CNAM information at cost-based rates as required by Applicable Law and on the same terms and conditions that Verizon provides to itself, its Affiliates, or any third party.

13.6.6 Verizon shall provide a complete refresh of the CNAM information upon mutual agreement of Verizon and MCIIm and subject to applicable charges set forth in Attachment I.

13.6.7 Data Processing Requirements. Verizon and MCIIm shall mutually agree to standards on the following data processing requirements:

13.6.7.1 Identify the type of tape to be used in sending the test and initial load data, e.g., reel or cartridge tape.

13.6.7.2 Verizon shall, due to the size of an initial load, provide the records on magnetic tape and the daily update activity via electronic data transfer.

13.6.7.3 Daily update information must be provided to MCIIm on the same day as the change occurred through the electronic data transfer medium, NDM.

13.6.7.4 Identify tape or dataset label requirements.

13.6.7.5 Identify tracking information requirements, e.g., use of header and trailer records for tracking date and time, cycle numbers,

sending and receiving site codes, volume count for the given tape/dataset.

[Issue No. IV-26, resolved]

Section 14. Tandem Switching

14.1 Definition

14.1.1 Tandem Switching includes trunk-connect facilities, the basic switching function of connecting trunks to trunks, and the functions that are centralized in tandem switches. Tandem Switching creates a temporary transmission path between interoffice trunks that are interconnected at a Verizon access tandem switch for the purpose of routing a call or calls.

14.2 Technical Requirements

14.2.1 Tandem Switching shall provide:

14.2.1.1 Signaling to establish a tandem connection;

14.2.1.2 Screening and routing at Parity;

14.2.1.3 To the extent Technically Feasible and at Parity, Tandem Switching shall provide recording of billable events;

14.2.1.4 Tandem Switching shall provide AIN triggers supporting AIN features at Parity with its provision of such triggers;

14.2.1.5 Verizon's Tandem Switching shall provide access to toll free and Number Portability databases in the same manner as it provides such access to itself;

14.2.1.6 Tandem Switching shall provide all trunk interconnections, where available, in Verizon's access tandems; and

14.2.1.7 Tandem Switching shall accept connections (including the necessary signaling and trunking interconnections) between end offices, IXC's, ITC's, CAP's and CLEC switches that subtend/interconnect at the same tandem.

14.2.2 Tandem Switching shall provide local tandeming functionality between two End Offices that subtend/interconnect at the same tandem, including two offices belonging to different CLECs (e.g., between an MCIm end office and the end office of another CLEC).

14.2.3 Tandem Switching shall preserve CLASS/LASS features and Caller ID as traffic is processed on SS7 trunk groups at Parity. Additional signaling information and requirements are provided in Section [12].

14.2.4 Verizon shall perform routine testing and fault isolation on the underlying switch that is providing Tandem Switching and all its interconnections at Parity with its performance of such testing for its own subscriber services. When commonly available, the results of the testing shall be made immediately available to MCIIm.

14.2.5 Tandem Switching shall control congestion using capabilities such as automatic congestion control and network routing overflow. Congestion control provided or imposed on MCIIm traffic shall be at Parity with controls being provided or imposed on Verizon traffic for itself and its subscribers.

14.2.6 Tandem Switching shall route calls to Verizon or MCIIm endpoints or platforms for which Tandem Switching is provided. For Tandem Switching with unbundled Shared Transport, call routing including overflow is accomplished as Verizon's network normally routes the calls. For Tandem Switching with unbundled Dedicated Transport, specific routing may be requested through the BFR process.

14.2.7 Tandem Switching shall process originating toll-free traffic received from an MCIIm local switch.

14.2.8 In support of AIN triggers and features, Tandem Switching shall provide SSP capabilities at Parity with Verizon's provision of these capabilities for its own subscribers under the same circumstances when these capabilities are not available from Local Switching.

14.2.9 The Local Switching and Tandem Switching functions may be combined in an office. If this is done, both Local Switching and Tandem Switching shall provide all of the functionality required of each of those Network Elements in this Agreement.

14.3 Interface Requirements

14.3.1 Tandem Switching shall interconnect, with direct trunks, to all carriers with which Verizon interconnects.

14.3.1.1 Transit traffic that is originated by an ITC or wireless carrier shall be settled in accordance with the terms of an appropriate IntraLATA Telecommunications Services Settlement Agreement between the Parties substantially in the form appended hereto as Exhibit C. Meet-Point Billing compensation arrangements as described in Section [4] of

Attachment I shall be utilized for compensation for the joint handling of toll traffic.

14.3.1.2 Verizon expects that most networks involved in transit traffic will deliver each call to each involved network with CCS and the appropriate TCAP message to facilitate full interoperability of those services supported by Verizon and billing functions. In all cases, each Party shall follow the Exchange Message Record (EMR) standard and exchange records between the Parties and with the terminating carrier to facilitate the billing process to the originating network.

14.3.1.3 Transit traffic to and from MCIIm shall be routed over the traffic exchange trunks.

14.3.2 Verizon shall provide signaling necessary to provide Tandem Switching with feature functionality impacts and effects at Parity.

Section 15. Additional Requirements

[Issue No. IV-27 & VI-3(K), resolved]

15.1 Cooperative Testing. MCIIm and Verizon shall perform testing of UNEs in accordance with generally accepted industry standards and practices for equivalent retail services. Upon reasonable request, based on maintenance and/or billing history, the Parties shall cooperate with respect to testing, trouble isolation and correction in connection with such history.

[Issue No. VI-1(F), resolved]

15.2 Customer Not Ready Work Activity. If as the result of MCIIm Customer actions (i.e., Customer Not Ready ("CNR")), Verizon cannot complete requested work activity when a technician has been dispatched to the MCIIm Customer premises, MCIIm, will be assessed a non-recurring charge associated with this visit. This charge will be the sum of the applicable Service Order charge specified in the Pricing Attachment and the Premises Visit Charge as specified in Verizon's applicable retail or Wholesale Tariff.

[Issue No. VI-1(H), resolved]

15.3 Maintenance of UNEs. If (a) MCIIm reports to Verizon a Customer trouble, (b) MCIIm requests a dispatch, (c) Verizon dispatches a technician, and (d) such trouble was not caused by Verizon's facilities or equipment in whole or in part, then MCIIm shall pay Verizon a charge set forth in the Pricing Attachment for time associated with said dispatch. In addition, this charge also applies when the Customer contact as designated by MCIIm is not available at the appointed time. MCIIm accepts responsibility for initial trouble isolation and providing Verizon with appropriate dispatch information based on its test results. If, as the result of MCIIm instructions, Verizon is erroneously requested to

dispatch to a site on Verizon company premises ("dispatch in"), a charge set forth in the Pricing Attachment will be assessed per occurrence to MCIIm by Verizon. If as the result of MCIIm instructions, Verizon is erroneously requested to dispatch to a site outside of Verizon company premises ("dispatch out"), a charge set forth in the Pricing Attachment will be assessed per occurrence to MCIIm by Verizon. Verizon agrees to respond to MCIIm trouble reports on a non-discriminatory basis consistent with the manner in which it provides service to its own retail Customers or to any other similarly initiated Telecommunications Carrier.

[Issue No. IV-17, resolved]

15.4 Bona Fide Request Process for new unbundled Network Elements is set forth in Section [6] of Part A of this Agreement.

Section 16. Basic 911 and E911

See Attachment VIII, Sections [6.1.1 and 6.1.2].

Section 17. Directory Assistance Data

See Attachment VIII, Section [6.1.7].